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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/020,615	12/13/2001	Paul Kunisch	112740-384	6590

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CHICAGO, IL 60690-1135

EXAMINER

PHAM, TUAN

ART UNIT	PAPER NUMBER
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2643

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8

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/020,615

Applicant(s)

KUNISCH, PAUL

Examiner

TUAN A PHAM

Art Unit

2643

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 December 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-6 is/are allowed.
- 6) ☒ Claim(s) 7-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>7</u> . | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 7 and 11-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Gammel et al. (U.S. Patent No. 5,974,363, hereinafter, "Gammel").

**Regarding claim 7,** Gammel teaches a method for internal functional testing of a subscriber circuit which functions as a connecting element between an analog part and a digital part of a telephone network with first and second telecommunications wires (see figure 2), the subscriber circuit including at least one signal processor (see figure 2, DSP 7531), at least one A/D converter (see figure 1, CODEC 7536) and at least one high voltage part having a plurality of switches (see figure 2, SLIC, switch sw2, sw4), the method comprising the steps of:

implementing a state of rest and an active operating state of an analog subscriber apparatus, which is connected to the subscriber circuit, via different settings of the plurality of switches (see col.5, ln.1-15, col.7, ln.23-30);

generating a test signal within the subscriber circuit for functional testing, wherein all of the switches are closed in a test operating state (see col.7, ln.23-56); and

comparing and evaluating a measured value with a reference value (see col.7, In.1-21, col.8, In.7-36).

**Regarding claim 11**, Gammel further teaches a method for internal functional testing of a subscriber circuit wherein a d.c. voltage is generated as the test signal (see col.7, In.23-56).

**Regarding claim 12**, Gammel further teaches a method for internal functional testing of a subscriber circuit wherein an alternating voltage is generated as the test signal (see col.7, In.23-56).

**Regarding claim 13**, Gammel further teaches a method for internal functional testing of a subscriber circuit wherein at least one of current measurements and voltage measurements are carried out in order to obtain the measured value (see col.6, In.1-30, col.7, In.23-55).

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gammel et al. (U.S. Patent No. 5,974,363, hereinafter, "Gammel") in view of Sanders (U.S. Patent No. 5,761,273).

**Regarding claim 8**, Gammel teaches a method for internal functional testing of a subscriber circuit which functions as a connecting element between an analog part and a digital part of a telephone network with first and second telecommunications wires (see figure 2), the subscriber circuit including at least one signal processor (see figure 2, DSP 7531), at least one A/D converter (see figure 1, CODEC 7536) and at least one high voltage part having a plurality of switches (see figure 2, SLIC, switch sw2, sw4), the method comprising the steps of:

implementing a state of rest and an active operating state of an analog subscriber apparatus, which is connected to the subscriber circuit, via different settings of the plurality of switches (see col.5, ln.1-15, col.7, ln.23-30);

generating a test signal within the subscriber circuit for functional testing, wherein all of the switches are closed in a test operating state (see col.7, ln.23-56); and

comparing and evaluating a measured value with a reference value (see col.7, ln.1-21, col.8, ln.7-36).

It should be noticed that Gammel fails to clearly teach a method for internal functional testing of a subscriber circuit wherein, in order to avoid a ringing tone, the test signal is generated with a frequency which is less than 16 Hz or greater than 54 Hz. However, Sanders teaches such features (see col.1, ln.25-30) for a purpose of detecting a particular frequency range.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the use of internal functional testing of a subscriber circuit wherein, in order to avoid a ringing tone, the test signal is generated

with a frequency which is less than 16 Hz or greater than 54 Hz, as taught by sanders,  
into view of Gammel in order to provide quickly and easily test to the subscriber line.

5. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gammel et al. (U.S. Patent No. 5,974,363, hereinafter, "Gammel") in view of Bennett et al. (U.S. Patent No. 5,311,589, hereinafter, "Bennett").

**Regarding claim 9**, Gammel teaches a method for internal functional testing of a subscriber circuit which functions as a connecting element between an analog part and a digital part of a telephone network with first and second telecommunications wires (see figure 2), the subscriber circuit including at least one signal processor (see figure 2, DSP 7531), at least one A/D converter (see figure 1, CODEC 7536) and at least one high voltage part having a plurality of switches (see figure 2, SLIC, switch sw2, sw4), the method comprising the steps of:

implementing a state of rest and an active operating state of an analog subscriber apparatus, which is connected to the subscriber circuit, via different settings of the plurality of switches (see col.5, ln.1-15, col.7, ln.23-30);

generating a test signal within the subscriber circuit for functional testing, wherein all of the switches are closed in a test operating state (see col.7, ln.23-56); and

comparing and evaluating a measured value with a reference value (see col.7, ln.1-21, col.8, ln.7-36).

It should be noticed that Gammel fails to clearly teach a method for internal functional testing of a subscriber circuit wherein, in order to avoid a ringing tone, the test

signal is generated having an amplitude which lies below a response threshold of ringing tone detector circuits and alarm clocks. However, Bennett teaches such features (see col.12, ln.11-22) for a purpose of detecting a particular frequency range.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the use of internal functional testing of a subscriber circuit wherein, in order to avoid a ringing tone, the test signal is generated having an amplitude which lies below a response threshold of ringing tone detector circuits and alarm clocks, as taught by Bennett, into view of Gammel in order to provide quickly and easily test to the subscriber line.

6. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gammel et al. (U.S. Patent No. 5,974,363, hereinafter, "Gammel") in view of Malek (U.S. Patent No. 4,829,517).

**Regarding claim 10**, Gammel teaches a method for internal functional testing of a subscriber circuit which functions as a connecting element between an analog part and a digital part of a telephone network with first and second telecommunications wires (see figure 2), the subscriber circuit including at least one signal processor (see figure 2, DSP 7531), at least one A/D converter (see figure 1, CODEC 7536) and at least one high voltage part having a plurality of switches (see figure 2, SLIC, switch sw2, sw4), the method comprising the steps of:

implementing a state of rest and an active operating state of an analog subscriber apparatus, which is connected to the subscriber circuit, via different settings of the plurality of switches (see col.5, ln.1-15, col.7, ln.23-30);

generating a test signal within the subscriber circuit for functional testing, wherein all of the switches are closed in a test operating state (see col.7, ln.23-56); and

comparing and evaluating a measured value with a reference value (see col.7, ln.1-21, col.8, ln.7-36).

It should be noticed that Gammel fails to clearly teach a method for internal functional testing of a subscriber circuit wherein a modified toll pulse signal is generated as the test signal. However, Malek teaches such features (see col.2, ln.45-68) for a purpose of detecting tone signals.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the use of internal functional testing of a subscriber circuit wherein a modified toll pulse signal is generated as the test signal, as taught by Malek, into view of Gammel in order to provide quickly and easily test to the subscriber line.

***Allowable Subject Matter***

7. Claims 1-6 are allowed.



### Conclusion

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8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. In order to expedite the prosecution of this application, the applicants are also requested to consider the following references. Although French et al. (U.S. Patent No. 6,317,494), Vimpari et al. (U.S. Patent No. 6,169,883), Ludeman (U.S. Patent No. 6,519,322), and Okazaki (U.S. Patent No. 6,169,785) are not applied into this Office Action; they are also called to Applicants attention. They may be used in future Office Action(s). These references are also concerned for supporting the system and method for testing subscriber line interface circuit.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Tuan A. Pham** whose telephone number is (703) 305-4987. The examiner can normally be reached on Monday through Friday, 8:00 AM-5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Curtis Kuntz can be reached on (703) 305-4708 and

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Art Unit: 2643

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Art Unit 2643

May 20, 2004

Examiner

Tuan Pham

  
CURTIS KUNTZ  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600